

Road Safety Plan 2021







Contents

| | |
|---------------------------------------|----|
| Minister's foreword | 02 |
| The Plan at a glance | 04 |
| The road trauma challenge in NSW | 08 |
| The Safe System saves lives | 10 |
| No body is built for speed | 11 |
| Priority areas: | |
| Saving lives on country roads | 12 |
| Liveable and safe urban communities | 14 |
| Using the roads safely | 16 |
| Building a safer community culture | 18 |
| New and proven vehicle technology | 20 |
| Building a safe future | 22 |
| A strong evidence base | 24 |
| The Road Safety Plan 2021 development | 25 |
| Community Road Safety Fund | 26 |
| Research and sources | 28 |

Minister's foreword

I am pleased to release the Road Safety Plan 2021 that details the NSW Government's commitment to improving safety on our roads.

The Plan is a priority for the Government to improve road safety, which is why we set a State Priority Target to reduce road fatalities by 30 per cent by 2021 (from 2008-10 levels).

We have made progress in saving lives on NSW roads, achieving the lowest road toll of 307 in 2014 – the lowest since records began in 1923. While we are nowhere near the peak of 1,384 fatalities in 1978, the road toll has been slowly increasing since 2015.

In 2017, 392 people lost their lives on our roads, almost 70 per cent of these fatalities occurred on country roads. That's 272 people dying in our regions. Country people are a third of the NSW population, yet consistently account for more than two thirds of deaths on our roads. In addition, we see over 12,000 total serious injuries every year as a result of crashes on our roads.

In developing the Plan, we engaged extensively with the NSW community as well as road safety experts – sharing evidence about what saves lives and reduces serious injuries. From this, we have identified issues and trends that need to be tackled and there is strong community support for more action.

Our priority areas for action include:

- › Saving lives on country roads – improving road safety infrastructure, including targeting high-risk roads and behaviours, as the fatality rate on country roads is four times the rate on metropolitan roads.
- › Safe urban places – addressing crashes in busy local areas, including pedestrian trauma which accounts for around 17 per cent of all deaths in NSW and 9 per cent of serious injuries.

- › Using the roads safely – preventing risky road behaviour, such as drink and drug driving.
- › Building a safer community culture – working in partnership with local and state road authorities, education providers, business and industry, vehicle manufacturers, community organisations and road safety advocates to build a safety culture.
- › New and proven vehicle technology – leveraging advances in technology to prevent crashes and minimise human error which contributes to around 94 per cent of crashes.
- › Building a safe future – ensuring that when we plan, develop, design, operate and maintain our roads, safety is at its core.

Building on the *NSW Road Safety Strategy 2012-2021*, the Plan reprioritises our focus and delivers targeted initiatives to help us reduce the daily trauma on our roads. Importantly, the Plan will also reinforce strong partnerships between government, local councils, stakeholders and the community to bring about real change.

As we strive towards the ultimate goal of zero deaths and serious injuries, the Road Safety Plan 2021 provides us with the next course of action for how we work together to save lives, reduce serious injuries and deliver safety as the standard we all live by on NSW roads.



The Hon. Melinda Pavey MP
Minister for Roads,
Maritime and Freight

**Someone is killed
or hospitalised every**



because of a crash
on NSW roads

The Plan at a glance

In NSW, we have been successful in reducing road trauma by taking co-ordinated action to improve the safety of roads and vehicles, set safer speeds and to ensure safer road user behaviour – but more can be done.

In 2017, 392 people were killed, and more than 12,000 suffered serious injuries – many with lifelong consequences for themselves and their families.

The Road Safety Plan 2021 features targeted and proven initiatives that will help us to progress towards our road safety goals, addressing key trends, behaviours and the types of crashes occurring on NSW roads.

If NSW had the same fatality rate as countries with the best road safety records such as Sweden or the United Kingdom, the lives of more than 180 people would have been saved in 2017.

Clear and ambitious targets and the adoption of a Safe Systems approach have helped NSW achieve reductions in the road toll.

However more can be done. Enhanced road design, safer speeds, safer vehicle technology and equipment, robust laws, education and enforcement work together to save lives.

Everyone has a role to play. Road builders and managers, vehicle and technology designers, lawmakers, Police, educators, industry bodies and all road users need to collaborate.

A plan for moving Towards Zero trauma

We are now halfway through implementation of the *NSW Road Safety Strategy 2012–2021*, and this Plan has been developed to set new priorities.

The Plan outlines how we will work towards the State Priority Target of reducing fatalities by 30 per cent by 2021 (compared to average annual fatalities over 2008–2010).

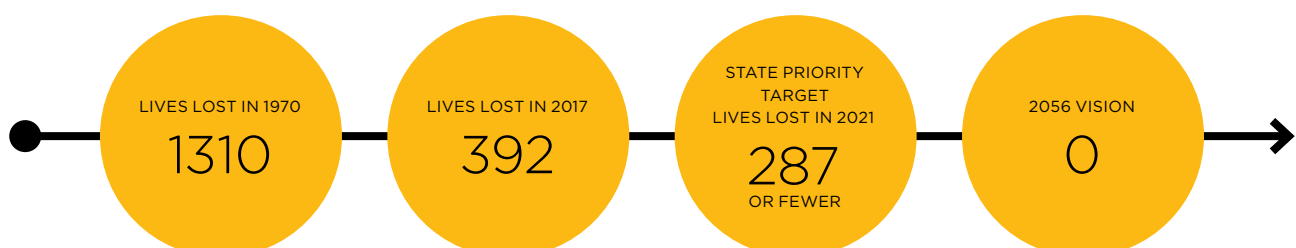
The Plan also aligns the Towards Zero vision with *Future Transport 2056*, which aims to have a NSW transport network with zero trauma by 2056.

The Plan brings together everything we know that is proven to prevent and reduce the impact of crashes and reflects the internationally recognised Safe System approach to improving road safety.

It has been developed based on evidence and expert advice from across Australia and countries with the safest roads in the world.

The Plan also takes on board feedback from across the community, gathered from forums and online engagement.

Transport for NSW will report annually on the progress of the priorities outlined in the Plan.



Taking action to save lives

Over the next five years, the NSW Government will deliver across six priority areas, including:

- **Deliver a new Saving Lives on Country Roads program** to address the challenge of more than two thirds of fatalities occurring on country roads, including:
 - Safety infrastructure upgrades targeting high risk curves and key routes, including local roads
 - Delivery of the first, targeted NSW country roads public education campaign
 - Partnering with local councils, community groups and industry to support grassroots Towards Zero initiatives.
- **Tackle drink and drug driving behaviour by strengthening penalties and enhancing enforcement, including**
 - Increased penalties for driving under the influence
 - Swift, strong and certain penalties for lower range drink driving and drug presence first offenders
 - Alcohol interlocks for mid-range offenders
 - Doubling mobile drug testing to 200,000 tests by 2020 and adding cocaine testing to the regime.
- **Develop a new NSW Police enforcement strategy** for regional and metropolitan NSW to target high risk behaviour.
- **Increase safety for vulnerable road users** by providing pedestrian crossings, refuges and traffic calming devices, as well as expanding 40km/h zones in high pedestrian and local areas.
- **Work with the heavy vehicle industry** to develop a new heavy vehicle strategy to improve operational safety and increase the uptake of safety technology.
- **Enhance NSW Government vehicle fleet policy** to increase the number of vehicles on our roads that become part of the used car market with lifesaving technologies, including autonomous emergency braking and other driver assist technologies.

- **Implement legislative changes** to allow camera based technology to enforce mobile phone use offences, and further analyse the role of distraction in the road toll.

The NSW Government will also continue to:

- **Deliver the Safer Roads Program** – annual improvements to road safety infrastructure across the network, including local roads.
- **Review and invest in road safety education campaigns** targeting key behavioural issues and at-risk groups, including understanding of and compliance with the Road Rules.
- **Ensure mandatory curriculum based road safety education** from early childhood through schooling – ensuring every child in NSW develops an understanding of how to use roads safely as they grow.
- **Work as a member of the Australasian New Car Assessment Program (ANCAP)** to encourage the development, testing and purchase of safer new and used vehicles.
- **Partner with the NSW Police to deliver the Enhanced Enforcement Program**, which targets and deters unsafe road use across the state.
- **Support the Local Government Road Safety Program** and councils in their role as custodians of the vast local road network.
- **Implement the Speed Camera Strategy**, ensuring drivers and riders travel at safe speeds across the network.
- **Develop young drivers through the Graduated Licensing Scheme** which has seen the number of fatalities involving young drivers halve since 2000.
- Provide high quality and **enhanced fatal and serious injury crash data and analysis** made available to the public and road safety delivery partners, and implement a **robust research program**.



NSW's road safety targets

Ambitious but achievable trauma reduction targets help to guide our investment, and reflect the NSW Government's commitment to make NSW roads the safest in the country.

2021

Reduce road fatalities by at least 30 per cent from 2008-2010 levels by 2021.
This is our State Priority Target.

2026

New road safety targets will be set every 10 years, and reviewed every five years, to make sure we continue to move Towards Zero fatalities and serious injuries on our roads.

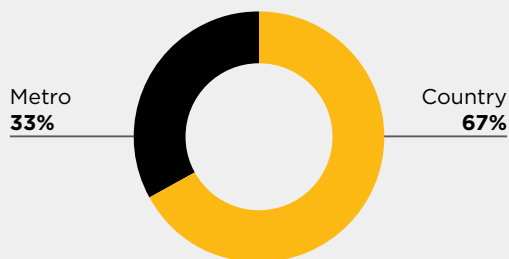
2056

NSW has set an aspirational target of zero fatalities and serious injuries on our roads by 2056.

The road trauma challenge in NSW

Each year, over two-thirds of fatalities in NSW occur on country roads

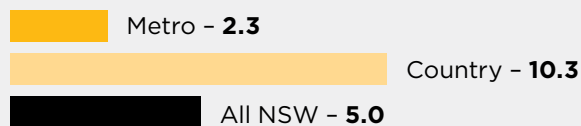
Fatalities by urbanisation



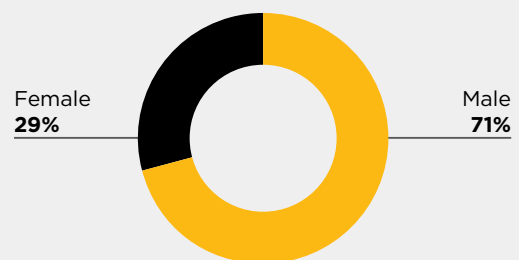
More than 70 per cent of people who die on country roads are country locals

Fatalities per 100,000 population (2017)

The fatality rate in country NSW is around 4 times the rate in metropolitan NSW



Fatalities by gender



Behavioural factors in NSW fatalities

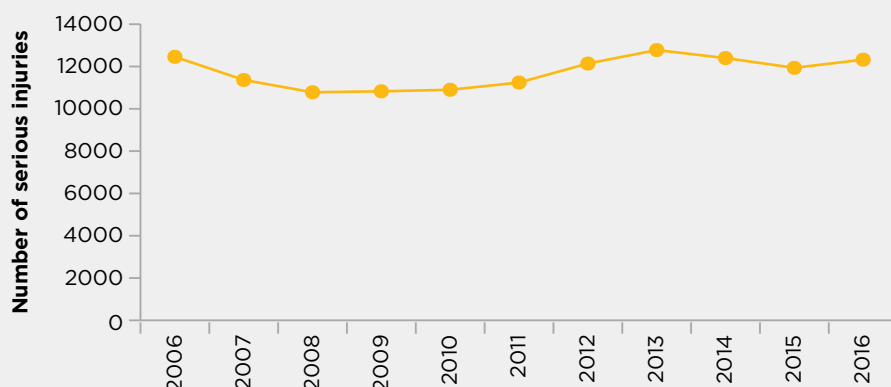


Serious injuries by urbanisation



However, the majority of serious injuries happen in metropolitan areas

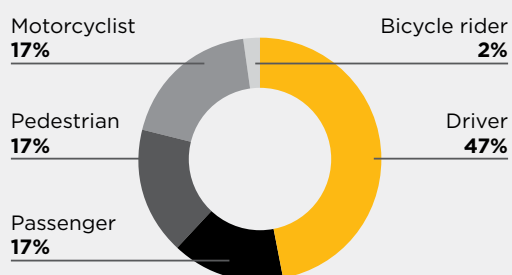
Total serious injuries by year



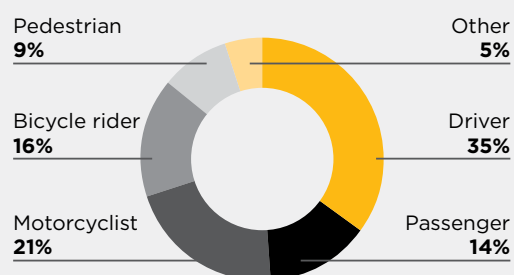
Unlike our long term downward trend in fatalities, the number of serious injuries per year is not declining

People who walk or ride a bicycle or motorcycle are vulnerable in a crash as the unprotected body can only tolerate so much force

Fatalities by road user



Total serious injuries by road user

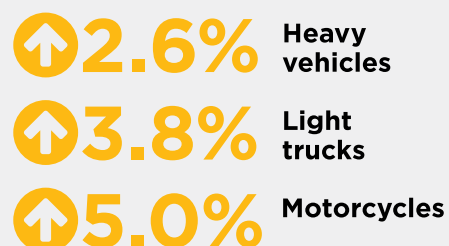


And the NSW vehicle fleet continues to grow each year

In **2009** there were **4.5 million** registered vehicles on NSW roads.

By **2017**, this had grown by **21%** to over **5.4 million**

Overall, light vehicle registrations are now **growing at 2.4 per cent each year**, but some types of vehicles are growing at a faster rate.



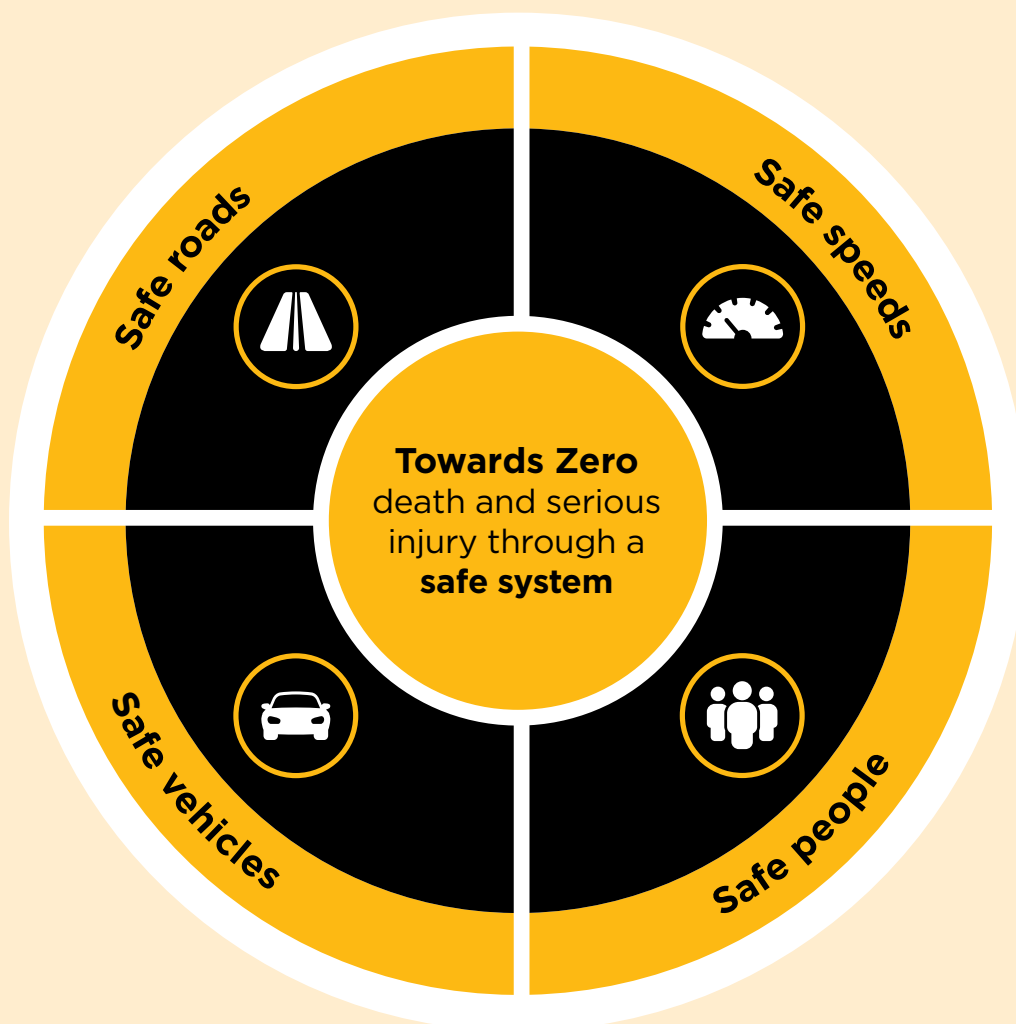
The Safe System saves lives

The Plan adopts the internationally recognised Safe System approach, which is a holistic and proven approach that acknowledges:

- › The human body has physical limits to withstanding the impact of a crash.
- › People sometimes make mistakes – but this shouldn't cost anyone their life.

- › Roads, roadsides, travel speeds and vehicles need to be designed to help avoid a crash or reduce the impact of a crash if it happens.
- › Road safety is a shared responsibility. We all need to make decisions with safety in mind, from the design of our roads and vehicles, investments, laws and education, to each road user acting safely every day.

Since adopting a Safe Systems approach in 1997, Sweden has reduced their fatality rate by more than half.



Safe vehicles and equipment

Innovation in vehicle technology, design and equipment can help avoid a crash or reduce the impact when a crash occurs. This includes features designed into vehicles, such as improved braking systems, lane keep assist and airbags as well as equipment like helmets, child restraints and motorcycle rider clothing.

Continuing to support smarter safer vehicle design, increasing the number of vehicles with lifesaving technology and increasing the number of people that choose the safest vehicles, is key.

Safe roads and speeds

Country roads need the road design features that allow people in regional NSW to move about safely, including protection from run off road and head on crashes.

Urban streets move people and goods around densely populated areas, so roads need to be designed for the separation of vulnerable road users and with speeds that are safe.

Safe people

From the day we leave hospital in a safety capsule through to school, adulthood and older age, we need to have the knowledge, skills, attitudes and information to make safe choices on our roads.

No body is built for speed

Our bodies are not designed to withstand the forces of a crash. And the bodies of children and older people are even more fragile.

If you're involved in a crash, vehicle speeds, the safety features of the road and your vehicle will determine whether you survive. If you survive a crash, the impact speed will determine how seriously you are hurt.

The same principle – increased impact speed means increased consequences – applies to all crashes. At the same time, vehicle safety features, safety equipment and road design features will help minimise the impact of a crash or contribute to the crash being avoided.

How fast you travel is within the control of every driver and rider.

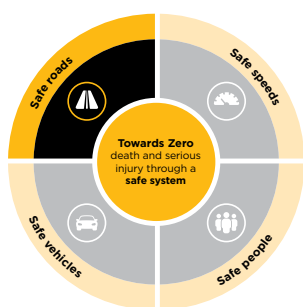
For every extra 1km/h of speed:

The stopping distance increases

More time is needed to react and avoid a crash

The impact of a crash is more severe

The likelihood of serious injury or death increases



PRIORITY AREA

Saving lives on country roads

Reducing fatalities on country roads is one of our biggest challenges and a key focus of the Plan.

The fatality rate on country roads is four times that of metropolitan roads. In 2017, 272 people lost their lives on a country road. This trauma affects local country communities and families. On average, over 70 per cent of the lives lost on country roads are locals, country residents.

Roads are crucial to country life, linking people and goods to regional and economic centres and connecting NSW to the rest of Australia. Fewer transport options means people living outside of major centres rely on the vast country road network.

But these roads can lack the safety features that help prevent a crash or protect road users if a crash occurs, especially at higher speed.

Almost 8 in 10 fatalities on country roads that have a speed limit of 100km/h or higher involve the vehicle crossing the centre line (54 per cent) or running off the road to the left (23 per cent). Many of these crashes can be prevented, or the harm reduced, with simple road infrastructure upgrades.

At the same time as making the roads safer, we need people driving safer vehicles, continued education and communications, all underpinned by enforcement measures, including highly visible policing.

What we know

Infrastructure safety upgrades on country roads save lives. There are a range of proven, cost effective options available that can build safety into country roads.

Audio tactile (rumble) line marking and wide centre lines reduce crashes like running off road by up to 35 per cent and can be implemented quickly and cost effectively on long stretches of our highest risk roads.

Flexible barriers effectively separate oncoming traffic and protect vehicles from roadside hazards. These barriers can reduce key crash types on country roads by up to 85 per cent, and are especially important as a safety solution on our key transport corridors.

In countries with the safest roads, the road design and safety features reflect the volume of traffic and the risks, as well as the role that the road plays for the community and economy. Providing passing lanes, coupled with wide centre lines, audio tactile line marking or safety barrier systems (such as 2+1 road design) can reduce the risk of run off road and overtaking crashes and facilitate safe movement of goods and people for the NSW economy.

There is strong community support for these types of treatments, which will form the basis of our Saving Lives on Country Roads Program.

More than two thirds of fatalities are on country roads – that's 250 lives lost each year



“I wasn’t wearing a seatbelt when the car crashed. Not only did my life change forever, but so did the lives of my parents, family and friends. I’m in a wheelchair for the rest of my life.”

Sam Bailey, Crash survivor

What we will do

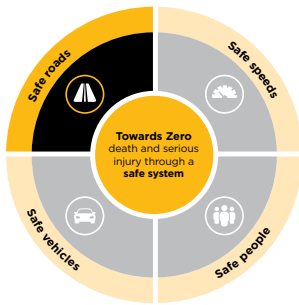
To address trauma on country roads, the NSW Government will:

- Implement a new Saving Lives on Country Roads Program to install and upgrade safety features on country roads and reduce run off road crashes, crashes on curves and head on crashes. This program will also coordinate infrastructure with education, enforcement and engagement, and includes:
 - Addressing high risk curves through improved curve signage, widened shoulders, vehicle activated signage and safety barriers
 - Reducing crash types commonly related to lane departure and driver fatigue by installing wide centre lines, flexible barriers, audio tactile (rumble) line marking and sealed shoulders
 - A targeted Saving Lives on Country Roads public education campaign, the first of its kind for NSW
 - Partnerships with local councils, community groups and industry to support grassroots Towards Zero initiatives
 - Ongoing targeted Police enforcement to reduce risky behaviour common in crashes on country roads.

- Enhancing planning and design of major road projects and upgrades with safety at the core. This will increase the proportion of travel on roads with proven safety features.
- Identifying high risk roads and, in consultation with the community, review travel speeds where there are limited road safety features protecting people if there is a crash.
- Continuing to deliver the Safer Roads Program to improve road safety on country roads, including works to upgrade features on regional motorcycling routes.

These targeted, new or enhanced initiatives will be integrated with complementary actions throughout the Plan and together will deliver a safer road system in country NSW.

This includes measures to increase the uptake of safe vehicles by country residents, enhance enforcement to shift unsafe behaviour, deliver targeted public education and engage country communities, councils and businesses.



PRIORITY AREA

Liveable and safe urban communities

NSW is a booming state and with more economic activity comes more movement on our roads.

The global trend towards more on-demand services and a delivery culture is making our urban environments busier. Increased numbers of people on local roads, including more trucks, pedestrians and bicycle riders, means we have to design roads to be shared and safe for everyone.

Pedestrians make up 17 per cent of NSW fatalities and 9 per cent of all serious injuries, while bicycle riders make up 16 per cent of all serious injuries. Most of these casualties occur on our urban streets.

The challenge is to keep our urban places liveable and safe. Our vibrant streets must allow people to move about safely as demand increases.

Roads around busy areas such as shopping centres, entertainment and sporting precincts, hospitals, education facilities and transport interchanges must be safe for the movement of people, goods and services.

What we know

We know that smarter road and intersection design, combined with lowering the speed limit in areas of high pedestrian activity, results in safety outcomes.

An evaluation of 40km/h high pedestrian activity areas in NSW found there was a 33 per cent reduction in crashes causing serious injuries and deaths between 2005 and 2015. These zones include busy shopping precincts and neighbourhoods. The benefits are not only for pedestrians, but for traffic efficiency and all road users.

Urban intersection upgrades such as installing right arrows can cut dangerous turning crashes by up to 80 per cent, and simple signal changes that give more time or priority to cross protect people crossing.

The community recognises the importance of these types of initiatives, with strong support for slowing traffic in high pedestrian and bicycle rider areas, while providing separation through infrastructure treatments.



“Our little boy, Tom, died on a local street as the result of road trauma. We started the Little Blue Dinosaur Foundation to increase child pedestrian safety awareness and to prevent these kinds of tragedies happening to other children and their families.”

**Michelle McLaughlin, Founder
Little Blue Dinosaur Foundation**

What we will do

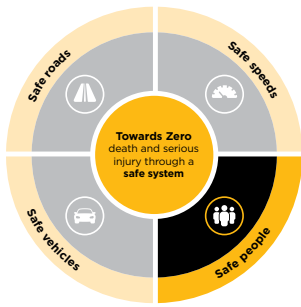
To improve the safety of people in our urban places, the NSW Government will:

- Install traffic calming, pedestrian refuges and crossings in busy urban places across NSW, to improve pedestrian and bicycle rider safety, and reduce casualty crashes.
- Partner with local government to expand 40km/h in high pedestrian activity and local areas to reduce crashes and protect pedestrians.
- Explore options to accelerate safety upgrades at intersections through the Safer Roads Program, including:
 - Works that deliver safer and more controlled vehicle turning to reduce the risk of dangerous side impact crashes, especially in locations with older and vulnerable road users
 - An expanded pedestrian protection (green on green removal) program and ongoing review of new technology and signal changes for safer pedestrian and bicycle rider movement
 - Raised intersection platforms, profile treatments, and innovative roundabout designs at more urban intersections to reduce serious injuries.
- Maximise safety integration in bicycle network programs to facilitate safer movement, provide separation from other traffic, where appropriate, and manage vehicle speeds.

These initiatives will be integrated with complementary actions outlined in the Plan, including communications and enhancements to road safety content in driver licensing to increase safe walking, cycling and vehicle interaction, and enforcement of unsafe road use in urban areas.

**Each year, 50 people
are killed and
thousands seriously
injured on our
neighbourhood streets**





PRIORITY AREA

Using the roads safely

Our community expects everyone to take responsibility for sharing the road safely with others.

What we know

In NSW, we have had great success in informing and motivating people to use the roads safely, and this has helped reduce road trauma.

In 1980, more than 380 people were killed in alcohol related crashes in NSW. We have tackled this challenge by combining education, random breath testing, a zero alcohol limit for novice drivers, tough penalties and improvements in vehicle and road design – a successful Safe System approach. In 2016, 59 people were killed in alcohol related crashes, with 85 per cent of these on country roads – a drastic reduction, but more can be done.

The NSW Government takes a whole of life approach to road safety education that supports safe road use – from early childhood education to first becoming licensed to choosing a child restraint and even retiring from driving.

We will continue our education and communications campaigns to underpin safer road use, and continue to tailor messaging to address new or emerging challenges as well as review and monitor the effectiveness of our campaigns.

All road users are supported by robust licensing schemes. Young driver deaths have reduced by 50 per cent since the Graduated Licensing Scheme was introduced in 2000. Ongoing effective enforcement and penalties complement and support education approaches.

There is strong community support for action that balances education and enforcement. This includes high visibility policing and speed camera use, alcohol interlock devices and ongoing enforcement programs testing for alcohol and drugs.



“It’s hard for me to see people texting or using their phone while driving. That’s what my daughter Brooke was doing when she crashed. We need to get the message out there that this costs lives.”

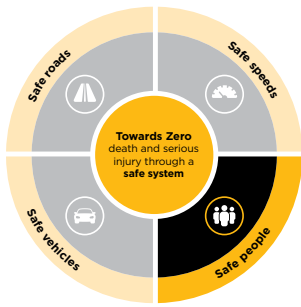
**Vicki Richardson, Founder
Don't Txt n Drive Foundation**



What we will do

To encourage people to use the roads more safely, the NSW Government will:

- Develop a new NSW Police enforcement strategy that will maximise the benefit of enforcement, reduce deaths on country roads and serious injuries in urban areas, and ensure safe heavy vehicle movements.
- Tackle drink and drug driving with stronger penalties and more enforcement, including:
 - Increasing penalties for driving under the influence of a drug, and powers to take offenders off the road after an offence
 - Doubling mobile drug testing to 200,000 tests by the end of 2020
 - Including cocaine testing in roadside drug enforcement
 - Ensuring tough penalties, including licence suspension notices and fines, are consistently and swiftly applied to all lower range drink driving and drug presence first offenders
 - Extending the requirement for mandatory alcohol interlocks to mid-range offenders
 - Exploring the option for vehicle sanctions at the roadside for high risk offenders
 - Extending the availability and requirement to complete a proven impaired driving education course to more offenders.
- Identify appropriate restrictions and safeguards to reduce the risk of driving while impaired by prescription drugs, balanced with the needs of people taking medication.
- Work in collaboration with the NSW Sentencing Council to review sentencing of high risk, repeat traffic offenders who may pose an ongoing risk to the community.
- Investigate opportunities to use in-car dashboard camera footage to report illegal behaviour.
- Complete a review of road safety public campaigns to ensure messaging is effective, engaging and targeted.
- Implement changes to the law to allow camera based detection of mobile phone offences.
- Expand the heavy vehicle average speed camera program to metropolitan areas to address risks associated with greater truck movements.
- Review the penalty framework for speeding offences, including demerit points and fine levels, the potential to apply intelligent speed technology to repeat offenders, and consider options to test for and reduce driving tired.
- Continue to refine the current initiatives that inform and motivate road users, including:
 - Communications about new and misunderstood road rules, to address the different road safety issues in country and urban areas and to reinforce enforcement activity.
 - Ongoing review of options to optimise the Road Rules, regulations and safety legislation.
 - The enhanced Graduated Licensing Scheme for drivers and the Safer Drivers Course.



PRIORITY AREA

Building a safer community culture

Road trauma touches many people and can have lifelong consequences.

We need to bring people with a passion and commitment for road safety together and support them to take action to improve road safety from the grassroots and up.

The Plan will be underpinned by a strong and growing partnership between NSW Government agencies, local and state road authorities, education providers, business and industry, vehicle manufacturers, community organisations and road safety advocates.

By focusing on road safety as a joint responsibility, we can work in partnership to build a safety culture and accelerate innovative solutions to move Towards Zero.

What we know

There are already organisations in the community that are actively bringing change, such as employers who support the safety of their workers through safer vehicles and workplace practices.

Similarly, partnering with local councils to further embed the safe system approach into planning and everyday operations will help them work Towards Zero in their own communities. Highlighting road safety across local communities will help bring awareness and support for action.

The aim is for everyone to adopt ways of making every journey a safe journey.



“A driver licence means you have the freedom to move around and assist your community. You have more chance of getting a job, can attend events and help your elders. I help my mob get their licence and keep safe, it is a very rewarding job”.

Uncle Bucky Robinson,

ACE College Senior Aboriginal Driving Instructor

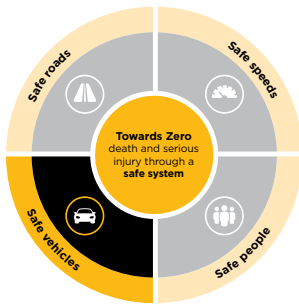


Around 1 in 3 NSW road users report that they, or someone close to them, have been involved in a serious crash

What we will do

To improve safety through partnerships, the NSW Government will:

- › Develop a new heavy vehicle safety strategy and partnerships with the heavy vehicle industry, including champions of change, to improve safety of the freight task across NSW.
- › Continue to implement the Motorcycle Safety Action Plan 2017-2019 and review the motorcycle Graduated Licensing Scheme.
- › Enhance communications, initiatives and tools to help employers and industry embed a road safety culture – especially for work related journeys and high risk shift workers.
- › Increase access to licensing, safe and legal driving and improve social outcomes by expanding support and mentoring programs for disadvantaged people.
- › Develop and implement an Aboriginal community engagement and capacity building program to support road safety in Aboriginal communities.
- › Identify the road safety needs and priorities for culturally and linguistically diverse road users and new residents.
- › Work with fleet owners to increase proactive use of alcohol interlocks in fleet vehicles, and other safety features such as automated emergency braking and lane assist.
- › Develop a Towards Zero community partnership with local government, institutions and business to improve local road safety across NSW.
- › Develop integrated communications about licensing, safer transport and health factors and driving for older road users, their family/ carers and the medical network.
- › Develop new platforms and enhanced road safety content in driver testing, including safe interaction with heavy vehicles, motorcyclists, bicycle riders and pedestrians, and support with new digital education for young drivers and their parents/carers.
- › Update early childhood and school road safety education resources to embrace technology, social media and emerging platforms and reflect the latest education approaches.
- › Develop a new partnership framework for road safety education advocates, community and commercial road safety education providers, including by reviewing driver training courses offered in NSW.
- › Continue to deliver and refine the key programs which inform and motivate road users, including:
 - Mandatory road safety education for every child in NSW and safety around schools initiatives
 - Local Government Road Safety Program – delivering road safety in local communities across the state through local council road safety officers
 - Community Road Safety Grants – exploring how communities can further encourage grassroots action.



PRIORITY AREA

New and proven vehicle technology

We all know that the design of your car makes a huge difference to your safety in a crash.

Vehicle safety technologies that help prevent us from crashing are becoming more widely available. While fully automated vehicles may seem a long way from reality, automated technology is already in many of the new vehicles on the market.

What we know

Existing technologies, such as lane keep assist, auto emergency braking and side curtain airbags can reduce the risk of a crash, or the severity of an injury if a crash cannot be avoided. Auto emergency braking has been found to reduce rear end crashes by 38 per cent. However, the deployment of these technologies is mostly in newer vehicles, which is reflected in crash trends. Only 38 per cent of cars and other light vehicles on NSW roads are Australasian New Car Assessment Program (ANCAP) 5-star safety rated.

To accelerate consumer uptake of the safest vehicles, the NSW Government is a founding member of ANCAP, which conducts independent testing of safety features in vehicles to promote safer choices for new cars. Often those who most need the safest vehicles, such as less experienced young drivers or more physically frail older drivers, drive the least safe vehicles.

ANCAP has been successful in providing a market based motivation to supply the safest cars available for people to purchase. Used Car Safety Ratings are also supported by the NSW Government to help people in the market for a used car to buy the safest car they can afford.

Fleet buyers, including Government, also play a role in ensuring the safety of the used car market by purchasing and on-selling vehicles with more safety technologies.

Research and innovation in vehicle safety is moving at a rapid pace, so it is important that the NSW Government works with the vehicle manufacturing industry to lead and support the introduction of vehicles with new safety technologies. The road environment also needs to support emerging safety features, like lane keep assist, as vehicle automation increases.

Technology can also help improve safety equipment, such as child restraints, protective motorcycle clothing, and helmets. The opportunity provided by proven and emerging technology in the design of safety equipment and vehicles – cars, light trucks, heavy vehicles and motorcycles – is therefore a key element of a Safe System.



“I hit a cow on a high speed road at night. If I didn’t have airbags and a newer model car, I would not be here. I had just dropped off my two year old grandchild, I’m so grateful she wasn’t in the car with me.”

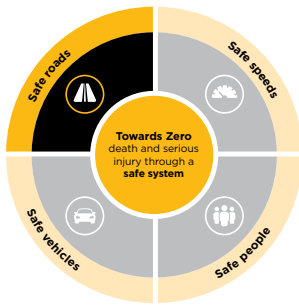
Peter Smith, Crash survivor

Of those killed in cars on our roads, around 40 per cent were in cars 15 years old or older compared to around 15 per cent in cars less than 5 years old

What we will do

To improve the safety provided by new and proven technology, the NSW Government will:

- Increase the uptake of new safety technology in the fleet by leading the way:
 - Update our policies so as many NSW Government fleet vehicles as possible have the latest and proven safety technologies, including auto emergency braking, other driver assist technology and 5-star rated commercial vehicles, where available
 - Explore options to ensure Government contractor vehicles meet the same standard.
- Increase uptake of safer new and used vehicles, particularly by younger and older road users, country residents and fleet managers through new public communications.
- Investigate with the insurance industry opportunities to reduce premiums for customers who adopt safer vehicle technology and telematics.
- Partner with the heavy vehicle industry to:
 - Increase safety features in the fleet, such as blind spot monitoring and under run protection
 - Enhance integration of fleet safety into heavy vehicle access policy.
- Adopt the highest safety standards in connected and automated vehicle trials and early uptake, and work to deliver supporting road and regulatory conditions for new technology.
- Work with the Australian Government to fast-track the adoption of new technologies into vehicle standards, including for commercial and heavy vehicles.
- Continue to deliver and refine the current programs improving vehicle and equipment safety through:
 - Ongoing commitment to ANCAP, including testing for pedestrian safety, and Used Car Safety Ratings
 - Continued research and testing of child restraints, helmets, crash avoidance technology on all types of vehicles and other safety equipment
 - Testing motorcycle protective clothing and promotion of the safest clothing options
 - Enhancing post-crash response initiatives, including automated crash notification (e-alert) systems
 - Supporting the Australian Naturalistic Driving Study, Cooperative Intelligent Transport Initiative and FleetCat initiative which enable us to build research understanding and trial fatigue and distraction monitoring and crash avoidance technologies.



PRIORITY AREA

Building a safe future

As the NSW population, road network and trips continue to grow, we have the opportunity to make sure new and upgraded roads are safe by designing in the latest proven safety features.

How we plan, develop, design, operate and maintain roads is fundamental to ending road trauma. Smarter and integrated planning can prevent crashes from occurring. If a mistake happens, better road design can mean that the impact of the crash doesn't result in death or serious injury.

What we know

By making sure we consider how customers interact with our road network, we can determine the safety features a road needs.

For a safe system, we need to understand and reduce risks across the network, not just focus on black spots. Star rating road assessment involves reviewing the safety features of a road and the way it is used to provide a 'star' score.

Star ratings are based on road design elements known to influence the likelihood of a crash and its severity such as lane and shoulder width, road curvature and the presence of safety barriers. Roads are assigned a score from one star (least safe) to five stars (most safe).

The rating system can help plan future road improvements, and ensure the roads that more people use have the right safety features and systematically reduce the overall risk of road trauma.

Looking to the future, it will be important that we ensure road network infrastructure is ready and able to support new technologies that allow vehicles and roads to communicate for improved safety (for example, communicating the speed limit, or incidents ahead to road users).



What we will do

To improve the safety of the network, the NSW Government will:

- › Set road safety targets to drive the investment strategy for the state network, including targets for the proportion of travel on four and five star roads, and the proportion of the road network with safety features, including median and roadside barriers.
- › Enhance the core safety feature requirements for road design and road network corridor planning for different road types (including Smart Motorways) based on the road function, its star rating and the vehicle mix – including the emerging needs of connected and automated vehicles.
- › Review and identify enhancements to road maintenance programs to better include low cost safety features, such as enhanced line marking, wide medians, and audio tactile (rumble) line marking in ongoing programs.
- › Test and implement new technological solutions to better manage and report on road safety infrastructure and options to improve maintenance.
- › Increase education and training on the Safe System approach and road safety requirements for state and local road authorities who are responsible for day-to-day management and maintenance of roads.
- › Continue to trial and research the latest infrastructure innovations, such as new barrier, signage and connected infrastructure technology, in NSW conditions.
- › Review international safety systems and standards that help road authorities and other organisations take a robust, safe system approach to road safety.

Upgrading a road from a 2 star to 3 star safety rating can reduce fatal and serious injury crash costs by around 60 per cent





A strong evidence base

NSW has some of the most extensive and high quality information on road crashes in the world. This has been achieved through strong partnerships between agencies and means we now have a clearer understanding of the true extent of serious injuries than ever before.

Since the release of the *NSW Road Safety Strategy 2012–2021*, we have enhanced our dataset to include the incidence and detail of serious injuries on NSW roads, a previously hidden toll affecting over 12,000 people each year.

This quality data helps us understand and better respond to what is causing road trauma, so it is important that we continue to enhance data collection and supporting systems to increase our understanding.

Given the importance of this information, we make it available to road safety practitioners, delivery partners and the community.

Ensuring we have a strong research agenda will see that road safety professionals have detailed understanding of lifesaving vehicle safety features and equipment, innovative road design and roadside safety features and the motivations behind unsafe driving behaviour. We need this valuable insight to overlay with our policies and programs to make sure they are saving lives.

What we will do

To support the success of the Plan and delivery of initiatives, the NSW Government will continue to have an evolving and robust research program that includes:

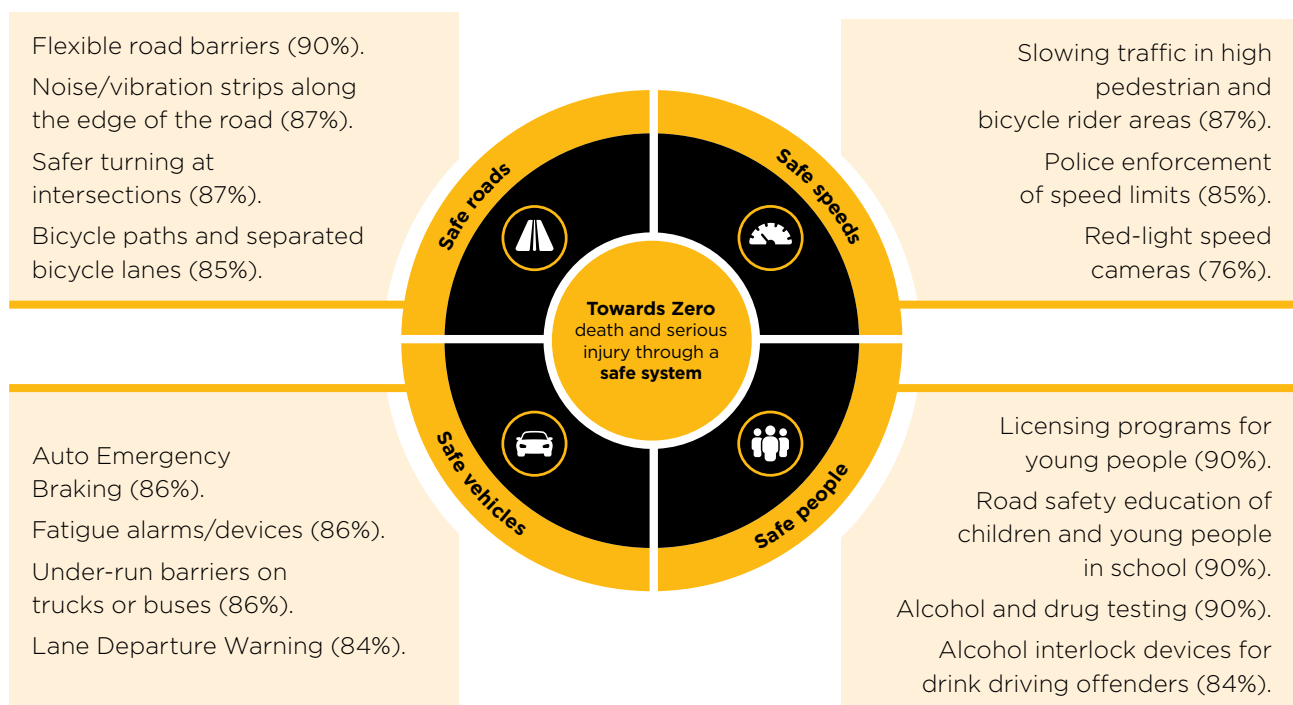
- Research into connected and emerging vehicle and infrastructure technology, telematics and other emerging vehicle applications.
- Behavioural and policy reform research to support and inform priority initiatives and education. Areas include, but are not limited to, drink and drug driving, driver distraction and mobile phone use, speeding, fatigue, and workplace driving.
- Trials of new and promising road and roadside safety products, such as barrier technology and signs, coupled with reviews of new and innovative road design approaches and safety programs internationally.
- Program evaluation research to improve how we implement programs, ensuring they are delivering expected outcomes.
- Safe system analysis of fatalities and serious injuries to help us understand all the reasons why crashes have occurred and how our systems can prevent these.
- Enhance data collection, information systems and safety performance indicators and continue to make information available, including to local councils, research partners and the community.

The Road Safety Plan 2021 was developed with our key partners and the community

Achieving our aspirational goal of moving Towards Zero trauma will require ongoing, whole of government collaboration and support and action from businesses, road safety advocates and every member of the community. That's why development of the Plan involved:

- › Ongoing consultation with the NSW Government's Road Safety Advisory Council.
- › Review of best practice to identify key initiatives in partnership with road safety researchers, experts and practitioners.
- › Consultation with local council representatives, and the community through a series of community forums across NSW.
- › Release of the draft Plan for comment in conjunction with Future Transport.
- › Workshop with key Aboriginal stakeholders to identify issues and culturally appropriate actions.

We also surveyed over 2,800 people asking them which measures they felt were important to achieving our goal and vision. Support for initiatives included:



In total, more than 4,000 people helped to develop the Plan, and a further 16,000 were engaged online

The Road Safety Plan 2021 builds on what has already been delivered through the Community Road Safety Fund

Since the establishment of the Community Road Safety Fund in 2013, the NSW Government has delivered programs that are saving lives and preventing serious injuries. A snapshot of these programs include:

Graduated Licensing Scheme reforms

The Graduated Licensing Scheme (GLS) prepares new drivers to be safe and low risk from L, P1 and P2 licence through to a full licence. Recent changes have been implemented to the GLS in efforts to continue improving and making our novice drivers safer. The changes are complemented by the Safer Drivers Course which assists learner drivers develop low risk driving practices through a combination of classroom teaching and practical on-road coaching. Over 80,000 young people have completed this course.

Public education campaigns

Road safety public awareness campaigns have resulted in changed attitudes toward road safety issues and improved safety behaviour. Campaigns during 2016–2017 included ‘Look Out Before You Step Out’, ‘Mobile Drug Testing’, ‘Get Your Hand Off It’, ‘They’re Counting on You’, ‘Plan B’, ‘Don’t Trust Your Tired Self’, ‘Road Rules Awareness Week’, ‘Think Twice’, ‘Ride to Live’, ‘Be Bus Aware’ and ‘Towards Zero’. In December 2017, two new campaigns ‘Saving Lives on Country Roads’ and ‘Stop it or cop it’ were launched.

Safer Roads Program

The Safer Roads Program is a statewide targeted infrastructure improvement program that delivers projects targeting a variety of road safety issues such as blackspots and dangerous intersections. The 10 year program commenced in 2014, with \$70 million on average invested in road safety upgrades each year. The 2017–2018 program will see 200 projects funded, of which almost 70 per cent are in regional areas.

New and used car safety ratings and vehicle research

The NSW Government has partnered with other states and road safety advocates to deliver the ANCAP and the Used Car Safety Ratings program to test new vehicles, promote safer vehicle purchases and rate the safety performance of used cars.

Innovation is supported by the NSW Government’s world-class Crashlab, which completes research and commercial testing of vehicles and safety equipment and underpins programs to support the purchase of safer child restraints and motorcycle helmets.

Flashing lights at schools

Every school in NSW now has at least one set of school zone flashing lights. Additional sets of school zone flashing lights have been installed at school zones with multiple busy entrances. Over 6,000 flashing lights have been installed since March 2011.



Road safety education for children and young people

The Road Safety Education Program provides educational resources and professional development for school teachers and early childhood educators throughout NSW. As part of the formal school curriculum, road safety is supported by quality education resources, including Safety Town, a website for primary school students, teachers and families, which has more than 50,000 users.

Enhanced police and speed camera enforcement

NSW Police are funded annually to provide additional on-road policing in high risk periods and areas with trauma trends and to deliver roadside drug testing.

Speed cameras are in place to support the work of NSW Police and include fixed, mobile and red-light speed cameras. Consecutive annual performance reviews have found that speed cameras save lives and prevent injuries. For example, the 2016 annual review found that at fixed speed camera locations, there had been a 92 per cent reduction in fatalities.

Towards Zero Strategy

The Towards Zero Strategy commenced in May 2016 with a campaign highlighting the human element of the road toll, the role we must all play and that no death is acceptable which is why we are working Toward Zero. The campaign is supported by a range of targeted road safety actions to help drive down crashes, fatalities and serious injuries.

Mandatory Alcohol Interlock Program

Motorists convicted of serious or repeat drink driving offences since February 2015 are required to participate in the Mandatory Alcohol Interlock Program. At December 2016, more than 7,516 interlocks had been ordered by the courts.

Road safety delivery through partnerships

Delivery of road safety initiatives by partners and stakeholders is critical to reducing the road toll, including grassroots projects across local communities. This includes our Local Government Road Safety Program, where 77 officers work across local councils to develop and deliver targeted programs in their communities.

Local initiatives are also supported through Community Road Safety Grants, with 76 local projects with a total value of over \$880,000 funded over three years since 2015-16.

Research and sources

Some of the key references used in the development of this Plan include:

Budd, L., Scully, M., Newstead, S.V. and Watson, L. The potential crash and injury reduction benefits of safer vehicle choices for older drivers in Australia and New Zealand. Monash University Accident Research Centre, report no. 315, 2012.

Bureau of Infrastructure, Transport and Regional Economics (BITRE). Evaluation of the National Blackspot Program Volume 1, 2012.

Elvik, R. Effects on road safety of converting intersections to roundabouts: review of evidence from non-US studies. Transportation Research Record: Journal of the Transportation Research Board, 2003, 1847: pp. 1-10.

Fildes, B. N., Langford, J. W., Andrea, D. J. and Scully, J. E. Balance between harm reduction and mobility in setting speed limits: A feasibility study. AP-R272/05, Austroads, Sydney, 2005.

Fildes, B., Newstead, S., Rizzi, M. et al. Evaluation of the effectiveness of anti-lock braking systems on motorcycle safety in Australia. Monash University Accident Research Centre, report no. 237, 2015.

Fildes, B., Keall, M., Bos, N. et al. Effectiveness of emergency autonomous braking on real-world rear end crashes. Accident Analysis & Prevention, 2015, 81: pp. 24-29.

Grundy, C., Steinbach, R., Edwards, P. et al. 20 mph zones and road safety in London: A report to the London Road Safety Unit. London: LSHTM, 2008.

Koornstra, M., Lynam, D., G. Nilsson et al. SUNflower: a comparative study of the development of road safety in Sweden, the United Kingdom, and the Netherlands. SWOV Institute for Road Safety Research, Leidschendam, Netherlands, 2002.

Larsson, M., Candappa, N. and Corben, B. Flexible barriers systems along high-speed roads: A lifesaving opportunity. Monash University Accident Research Centre, report no. 210, 2003.

Lie, A. et al. The effectiveness of electronic stability control (ESC) in reducing real life crashes and injuries. Traffic Injury Prevention, 2006, 7(1): pp. 38-43.

Norstrom, T. and Laurell, H. Effects of the lowering of the legal BAC limit in Sweden. Proceedings of the International Conference on Alcohol, Drugs and Traffic Safety, 1997.

Soole, D.W., Watson, B.C. and Fleiter, J.J. Effects of average speed enforcement on speed compliance and crashes: A review of the literature. Accident Analysis & Prevention, 2013, 54: pp. 46-56.

TfNSW Centre for Road Safety. Evaluation of 40 km/h speed limits. Evaluation report prepared by Martin Small Consulting for Transport for NSW, 2017.

TfNSW Centre for Road Safety. Review of Crash Reduction Factors – Research Report, 2015.

TfNSW Centre for Road Safety. Speed Camera Programs: 2016 Annual Review, 2016.

TfNSW Centre for Road Safety, Safety Technologies for Heavy Vehicles and Combinations, June 2017.

US Department of Transportation, National Highway Traffic Safety Administration (NHTSA). Evaluation of the New Mexico Ignition Interlock Program, DOT HS 811 410, November 2010.

Wramborg, P. A New Approach to Safe and Sustainable Road Structure and Street Design for Urban Areas. Proceedings of the Road Safety on Four Continents Conference, 2005.

NSW road trauma data

Fatality data reflects the average of 2015-2017 provisional data unless otherwise specified. 2017 fatality data is provisional and is correct as at 1 January 2018.

Serious injuries data is an average of matched serious injury data from 2014-2016 unless stated as 'all' or 'total' serious injuries (which includes both matched and unmatched data combined). Matched serious injuries data are where a police report has been matched to hospital admissions data.

As a proxy for neighbourhood street crashes the analysis uses data relating to unclassified roads with a speed limit of 50km/h or lower.

Extensive trauma data is regularly updated and available on the Transport for NSW's Centre for Road Safety website at www.roadsafety.transport.nsw.gov.au



Transport for NSW, Centre for Road Safety

T 02 8265 7149

E roadsafety@transport.nsw.gov.au

W roadsafety.transport.nsw.gov.au
towardszero.nsw.gov.au

Level 4 18 Lee Street Chippendale NSW 2008
PO Box K659 Haymarket 1240

February 2018

© Transport for NSW

The information in this brochure is intended as a guide only and is subject to change at any time without notice. It does not replace relevant legislation.

ISBN 978-1-925737-51-6

